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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,597	11/14/2001	Kenji Ose	SIC-00-001-4	3657

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EXAMINER
KIM, CHONG HWA

ART UNIT	PAPER NUMBER
3682	

DATE MAILED: 05/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/992,597	OSE, KENJI	
	Examiner	Art Unit	
	Chong H. Kim	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *34-37,40-47 and 49-72* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *34-37,40-47 and 49-72* is/are rejected.

7)☒ Claim(s) *68* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

The Examiner acknowledges the applicant's Amendment filed Mar 17, 2003 in response to the Office action made on Dec 12, 2002.

Claim Objections

1. Claim 68 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 68 depends on claim 68. Claim 68 has been considered as being dependent from claim 67 for this Office action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 34, 36, 40-47, 49-53, and 56-61 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang et al., U.S. Patent 5,588,331.

Huang et al. shows, in Figs. 2-4, a bicycle shift control device comprising;

a base member 20;

a rotatable dial 30, 40 coupled to the base member 20 for rotation coaxially around a rotational axis (along the handlebar), wherein the rotatable dial is exposed to the outside;

a finger contact projection (a distal portion of the dial 30 from the portion 40) extending from the rotatable dial in a direction of the rotational axis;

wherein the finger contact projection is structured to prohibit the extension of a finger between all portions of the finger contact projection and the rotatable dial;

wherein the finger contact projection extends in close proximity to the rotational axis;

a shift element coupler 50, 51 disposed with the rotatable dial;

wherein at least one of the dial and the base member includes a coupling projection 21 for coupling the dial to the base member;

wherein the rotatable dial and the finger contact projection are one piece;

wherein the base member includes a cable guide 60 having a cable guide opening for receiving a cable 70 therethrough;

further comprising an attachment band 24 extending from the base member, wherein the attachment band has a substantially cylindrical shape;

wherein the attachment band includes a first mounting hole 25 that aligns with a second mounting hole (that is formed in the extension 21);

wherein the shift element coupler is attached to the rotatable dial 40;

wherein the shift element coupler is fitted within a coupler bore 41 formed in the rotatable dial;

wherein the shift element coupler includes a cable end bead receiving opening (at the element 50);

wherein the shift element coupler has a substantially cylindrical shape 51, and wherein the cable end bead receiving opening extends diametrically through the shift element coupler;

a motion limiting structure 26, 45, 46 coupled to the base member and to the rotatable dial that limits a range of rotation of the rotatable dial relative the base member to a predefined arc, and wherein the rotatable dial moves unobstructively within the predefined arc between a cable pulled position and a cable released position;

wherein the motion limiting structure comprises a motion stop 26 that cooperates with a first limit stop 45 and a second limit stop 46;

wherein the motion stop 26 extends from the base member 20;

wherein the first limit stop 45 and the second limit stop 46 are disposed on the rotatable dial;

wherein the rotatable dial includes a motion limiting groove (between the stops 45 and 46 in Fig. 4) that forms the first limit stop 45 and the second limit stop 46; and

wherein the finger contact projection comprises a first finger contact surface (a portion of the surface on the element 30 that faces perpendicularly out of the paper) facing in a direction substantially perpendicular to the rotational axis, wherein the first finger contact surface at least partially forms a continuous surface with the rotatable dial; and a second finger contact surface (a portion of the surface on the element 30 that faces perpendicularly into the paper) facing in a direction substantially perpendicular to the rotational axis and opposite the first finger contact surface, wherein the second finger contact surface at least partially forms a continuous surface with the rotatable dial;

wherein the finger contact projection extends across substantially an entire diameter of the dial.

4. Claims 34-37, 56-59, and 71 are rejected under 35 U.S.C. 102(b) as being anticipated by Wechsler, U.S. Patent 3,965,763.

Wechsler shows, in Figs. 1-3, a bicycle shift control device comprising;

a base member 33;

a rotatable dial 22 coupled to the base member 33 for rotation coaxially around a rotational axis (bolt 34), wherein the rotatable dial is exposed to the outside;

a motion limiting structure 37, 38 coupled to the base member and to the rotatable dial that limits a range of rotation of the rotatable dial relative the base member to a predefined arc, wherein the rotatable dial moves unobstructively within the predefined arc between a cable pulled position and a cable released position;

a finger contact projection 32 extending from the rotatable dial in a direction of the rotational axis;

wherein the finger contact projection is structured to prohibit the extension of a finger between all portions of the finger contact projection and the rotatable dial;

wherein the finger contact projection extends in close proximity to the rotational axis;

a shift element coupler disposed with the rotatable dial (column 4, lines 46-50);

wherein the finger contact projection extends at least partially in a direction perpendicular to the rotational axis;

wherein at least one of the dial and the base member includes a coupling projection 34 for coupling the dial to the base member;

wherein the coupling projection 34 is disposed on the dial and extends into an opening in the base member (see Fig. 4);

wherein the motion limiting structure comprises a motion stop 38 that cooperates with a first limit stop (gear position number 1) and a second limit stop (gear position number 10);

wherein the motion stop 38 extends from the base member; and

wherein the first limit stop and the second limit stop are disposed on the rotatable dial.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al.

Huang et al. shows, as discussed above in the rejection of claims 34 and 36, the bicycle shift control device comprising the coupling projection formed on the base member for coupling the base member into the opening in the dial, but fails to show the coupling projection disposed on the dial and extending into an opening in the base member.

It would have been obvious to one having ordinary skill in the art to form the coupling projection and the opening of Huang et al. on the dial and the base member, respectively, since it

has been held to be within the general skill of a worker in the art to reverse or rearrange parts. In re Japikse, 86 USPQ 70 (CCPA 1950).

7. Claims 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wechsler in view of White et al., U.S. Patent 3,398,600.

Wechsler shows, as discussed above in the rejections of claims 34, 36, and 37, the bicycle shift control device comprising the coupling projection extending into the opening in the base member, but fails to show the coupling projection includes a slot and a locking abutment.

White et al. shows, in Figs. 4 and 5, a rotatable dial 26 comprising a coupling projection 22 having a slot 34 that allows the coupling projection to be compressed and wherein the coupling projection includes a locking abutment 40 facing the rotatable dial 26 for locking the rotatable dial to the base member.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the coupling projection of Wechsler with the snap-in coupling projection as taught by White et al. in order to provide a simpler design wherein the tolerances between the projection and the receiving end need not be accurately controlled, as described in column 2, lines 1-2 of White et al. so that the cost of manufacturing can be reduced.

8. Claims 61-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wechsler in view of Knop, U.S. Patent 3,766,793.

Wechsler shows, as discussed above in the rejections of claims 34 and 56, the bicycle shift control device comprising the finger contact projection, but fails to show the projection

extending across substantially an entire diameter, through the rotational axis, and perpendicular to the surface or outer portion of the dial towards the rotational axis of the dial.

Knop shows, in Fig. 1, a gear shift control device 10 comprising a base 22; a rotatable dial 10 coupled to the base member for rotation coaxially around a rotation axis 14, wherein the rotatable dial is exposed to the outside; a finger contact projection 16 extending from the rotatable dial in a direction of the rotational axis; wherein the finger contact projection is structured to prohibit the extension of a finger between all portions of the finger contact projection and the rotatable dial; wherein the finger contact projection extends in close proximity to the rotational axis; a shift element coupler 24 disposed with the rotatable dial;

wherein the finger contact projection extends across substantially an entire diameter of the dial;

wherein the finger contact projection extends through the rotational axis;

wherein the finger contact projection extends diametrically across substantially an entire diameter of the dial;

wherein the finger contact projection extends from a surface of the dial that is generally perpendicular to the rotational axis;

wherein the finger contact projection extends from an outer portion of the dial towards the rotational axis.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the dial of Weschler with the dial having the vertically extending finger contact projection as taught by Knop in order to provide a more ergonomic knob that can be turned with more ease.

9. Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wechsler in view of Knop.

Wechsler shows, in Figs. 1-3, a bicycle shift control device comprising;

a base member 33;

a rotatable dial 22 coupled to the base member 33 for rotation coaxially around a rotational axis, wherein the rotatable dial is exposed to the outside;

a motion limiting structure 37, 38 coupled to the base member and to the rotatable dial that limits a range of rotation of the rotatable dial relative the base member to a predefined arc;

a finger contact projection 32 extending from the rotatable dial;

wherein the finger contact projection rotates with the rotatable dial;

wherein the finger contact projection is structured to prohibit the extension of a finger between all portions of the finger contact projection and the rotatable dial; and

a shift element coupler disposed with the rotatable dial (column 4, lines 46-50);

but fails to show the finger contact projection being non-circular that extends upwardly from an upper surface of the dial and inwardly toward the rotational axis.

Knop shows, in Fig. 1, a gear shift control device 10 comprising a base 22; a rotatable dial 10 coupled to the base member for rotation coaxially around a rotation axis 14, wherein the rotatable dial is exposed to the outside; a noncircular finger contact projection 16 extending upwardly from an upper surface of the rotatable dial that is generally perpendicular to the rotational axis; wherein the finger contact projection rotates with the rotatable dial; wherein the finger contact projection extends radially inwardly toward the rotational axis; wherein the finger contact projection is structured to prohibit the extension of a finger between all portions of the

finger contact projection and the rotatable dial; and a shift element coupler 24 disposed with the rotatable dial.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the dial of Weschler with the dial having the vertically extending finger contact projection as taught by Knop in order to provide a more ergonomic knob that can be turned with more ease.

Response to Arguments

10. In response to applicant's argument that Huang fails to show the finger contact projection extending in close proximity to the rotational axis of the dial, it is the Examiner's view that the finger contact projection of Huang extends in close proximity to the rotational axis of the dial. It appears that the distance in question between the finger contact projection from the rotational axis is a matter of opinion. It could be that the finger contact projection of Huang is farther away from the rotational axis than the applicant's device. However, the finger contact projection of Huang extends in close proximity to the rotational axis of the dial enough so that an operator would not require too much rotational movements or torque to shift the gears.

11. In response to applicant's argument regarding the rejection of claims 34 and 35 by Kawakami et al under 35 USC 103, the Examiner withdraws the rejection.

12. In response to applicant's argument that Weschler fails to show the finger contact projection extending in close proximity to the rotational axis of the dial, again, it is the Examiner's view that the finger contact projection of Weschler extends in close proximity to the rotational axis of the dial. It appears that the distance in question between the finger contact

projection from the rotational axis is a matter of opinion. It could be that the finger contact projection of Weschler is farther away from the rotational axis than the applicant's device. However, the finger contact projection of Weschler extends in close proximity to the rotational axis of the dial enough so that an operator would not require too much rotational movements or torque to shift the gears.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (703) 305-0922. The examiner can normally be reached on Monday - Friday; 9:00 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on (703) 308-3668. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

chk
May 1, 2003

CHONG H. KIM
PRIMARY EXAMINER